

CITY OF NORTH BEND, WASHINGTON

POSITION DESCRIPTION



Class Title: SCADA Supervisor
Department: Public Works
Salary: \$5,800 - \$7,300 per month, DOQ
Non-Union, FLSA Exempt

First Review of Applications: Position Open Until Filled

POSITION SUMMARY:

Under limited supervision, provides technical oversight to the City's Supervisory Control and Data Acquisition (SCADA) System, as well as other related application software systems. This position will also perform a broad range of responsible and complex computer systems administration duties including technical support for desktop, server and network hardware, software and/or peripheral equipment.

ESSENTIAL FUNCTIONS include but are not limited to the following:

- Oversee the operation and maintenance of SCADA system and instrumentation equipment for the water and wastewater treatment plants, groundwater wells, reservoirs, metering stations, and booster pump sites; plan future improvements; and work with staff to improve the functionality of field operations.
- Install, program, update, customize and maintain SCADA system servers, workstations, networks, PC equipment, printers and related equipment including security requirements.
- Tie in current treatment plant equipment that is not connected to the SCADA system and develop the screens for operator access.
- Troubleshoot, diagnose, modify, repair, calibrate and maintain:
 - City's control systems (computer, electronic, pneumatic and hydraulic)
 - Process control instrumentation
 - Various instrumentation and control equipment, including, but not limited to, transducers, timers, switches, sensors, transmitters, monitors, recorders, detectors, flow meter, signal conditioners, annunciators, controllers, wiring, circuit breakers, over-current protection, isolators, terminal blocks, servers, motor controls and telemetry equipment, and archive devices
 - Programmable logic controllers (PLCs) based control system
 - Motor control center up to 480 volts
- Install and maintain SCADA radio communication equipment; program the SCADA radio for correct frequency; test and align radio signal; troubleshoot communication problems on a 24/7 basis.
- Analyze and define software, database, graphic display and external system interface requirements adhering to Water Authority Information Technology standards.
- Maintain inventory of hardware/software and software licenses. Maintain equipment records for assigned sites; update records for new equipment installations.

- Prepare and maintain a variety of records and reports, including calibration history on instrumentation and test equipment, maintain technical manuals, drawings and schematics for SCADA and equipment.
- Respond to emergency and off-hours situations as required.
- Design and program reports for operators and supervisors using data files and shared access data systems.
- Update technical and program documentation. Determine appropriate inventory of spare parts for critical instrumentation.
- Assist with preparing cost estimates and coordinate with vendors on SCADA and related contracts and equipment purchases, adhering to City purchasing policy and public bidding requirements.
- Supervise staff, consultants and contractors on SCADA, software, hardware, radios, antennas, instrumentation, and other technical equipment.
- Provide training to all maintenance workers on SCADA operations.
- Evaluate maintenance workers in performance of duties related to SCADA operations.
- Assist the Public Works Supervisor and/or Leads in the performance of their duties, particularly as it pertains to SCADA operations.
- Assist with general City-related information technology needs as directed including:
 - Perform back-up procedures for assigned PC files. Coordinate restoration and retrieval of files as needed. Maintain all files in an accurate and efficient manner.
 - Download data from disks and tapes to various computer systems/platforms
 - Evaluate, install, test and implement new servers, server operating systems and application software packages. Install new versions, releases or maintenance levels of existing server operating systems and related components.
 - Maintain network components, including routers, bridges, hubs, multiplexors and smart switches. Perform preventative maintenance to preclude major network outages or degradation to customer service.
 - Set up and monitor server back-up processes, add new users, modify user/group profiles, and monitor and tune-up server and system resources.
 - Audio/Video duties including set up, operating and maintaining equipment, and recording meetings and presentations as needed.
- Exhibit a strong commitment to internal and external customer service.
- Interact in a professional and respectful manner with city staff and the public.
- Train other employees and volunteers as required.
- Attend work on a regular and dependable basis, and work evening and/or weekend hours as required.
- Occasionally will attend weekly Management Team meetings and will hear confidential material including litigation updates and strategy.
- Assume other duties as assigned by Supervisor.

AUXILIARY DUTIES:

An employee in this classification is expected to routinely perform other duties as assigned that would typically be performed by another exempt employee.

SUPERVISION:

Work is performed under the supervision of the Public Works Director, City Engineer or Wastewater Treatment Plant Manager for SCADA related duties and under the supervision of the Assistant City Administrator for general information technology related duties. This position requires a high degree of initiative, independent judgment, and professional expertise. Work is reviewed through periodic consultation with the PW Director. Errors in judgment could have significant impact on City operations and could result in legal and fiscal liability for the City.

TOOLS AND EQUIPMENT USED:

- Work involves the use of a calculator, personal computer and associated software.
- Use and operation of SCADA software and hardware.
- Operate and maintain specialized tools and equipment, including computer diagnostic equipment, oscilloscope, signal simulator, calibrators, solder equipment, and others.
- Knowledge and use of applicable tools, instruments, computers, copiers, printers, fax machines, and other general office or field equipment related to the position.

WORK ENVIRONMENT AND PHYSICAL DEMANDS:

Work is performed both in the office and in the field, including multiple worksites. Work involves limited exposure to dust, grease, noise, cold and/or wet weather, toxic materials and toxic odors. May be required to climb ladders, lift and carry items weighing up to 50 pounds, and work near moving mechanical parts occasionally working in high, precarious place and can be exposed to electrical shock. Work requires prolonged periods of sitting, extensive use of computer keyboard and computer display, travel from office to various sites, moderate to light lifting and movement of equipment, and recurring standing, bending, stooping, kneeling, crouching, reaching and crawling.

DESIRED MINIMUM QUALIFICATIONS:**Education and Experience:**

- Bachelor's degree in Environmental Science, Engineering, Biology, Ecology, Chemistry, Math, Information Technology or related coursework required.
- Five (5) years of experience in information system installation and maintenance, engineering or water/wastewater field, with at least 2 years of progressively responsible experience in SCADA and/or Programmable Logic Control systems and associated equipment and software.
- Supervisory experience is desirable.
- An equivalent combination of experience and education which provides the required skills of the position will be considered.

Necessary Knowledge, Skills, and Abilities:

- Experience with Water Permit Requirements and past working relationship with Department of Ecology is highly desirable.
- Experience with Bristol-Babcock hardware/software for SCADA PLCs and Wonderware for HMI is highly desirable.
- City and Department rules, regulations, and policies.
- Understanding of basic water system operations including pumps and reservoirs.
- Advanced methods and techniques used in the installation, testing, troubleshooting and maintenance of PCs, servers, PLCs and related systems and equipment.
- Operational characteristics of a variety of computer platforms, networks, software applications and operation systems, including SCADA software and hardware.
- Knowledge of current technology related to the communication between PLCs, SCADA software, and database servers.
- Principles and procedures of record keeping, business writing, and report preparation.
- Principles and practices of program development and administration.
- Safety regulations and practices relating to water and wastewater treatment plants and related facilities, including applicable Federal, State and local regulations.
- Ability to create electronic maintenance records and reports database for the Water and WWTP facilities and operational requirements to be in compliance with local, Federal and State requirements.
- Ability to design or modify technical publications and instrument/electrical drawings.
- Ability to apply codes and guidelines in the design, installation and maintenance of all plant instrumentation.
- Ability to design, implement and maintain information systems and supporting hardware and software applications.
- Ability to monitor system and network activities, and detect, isolate and resolve information system problems.
- Ability to read, write and evaluate computer code written in a variety of programming languages and to code computer programs is highly desirable.
- Familiarity with Audio/Video equipment.
- Ability to interact cooperatively, establish and maintain effective working relationships with other employees, elected officials, contractors, engineers and the general public, and the ability to deal with the public and general contractors and suppliers in a tactful yet courteous and effective manner.
- Ability to plan, organize, direct and coordinate the work of lower level staff.
- Ability to clearly communicate orally and in writing in English at a level necessary for efficient job performance.
- Knowledge of electronic/electrical circuits and instrumentation test equipment.
- Demonstrated skills in Word, Excel, and Outlook and ability to learn other computer program applications as required by the job.
- Ability and willingness to have flexible work hours and respond to emergencies on a 24 hour basis if needed.

LICENSE AND CERTIFICATION REQUIREMENTS:

- Valid Washington State Driver's License.
- Valid First Aid Card or the ability to acquire within one year of appointment.

ADDITIONAL INFORMATION:

Reasonable accommodation will be made as required by the Americans with Disabilities Act to enable a person with a disability to perform the essential functions of this position. This description is not a contract of employment and is intended only to provide a general description of duties performed by an employee in this classification. Other duties may be assigned and this description may be amended as needed.